



Acceptance and delivery terms Herfa-Neurode Underground Waste Disposal Plant (Last revised: 1. September 2024)

ATTACHMENT

Instructions for use IBC-cage box

General instructions

Before assembling, transporting and using the IBC-cage box please read these instructions for use thoroughly.

This document contains safety instructions that must always be observed, together with information that is necessary to ensure trouble-free use.

Intended use and IBC-cage box components

The intended use of the **IBC-cage box** is to package waste materials for disposal at Herfa-Neurode underground waste disposal plant of K+S Minerals and Agriculture GmbH and for the associated transport of the waste to the site. Any other application is not considered to be intended use.

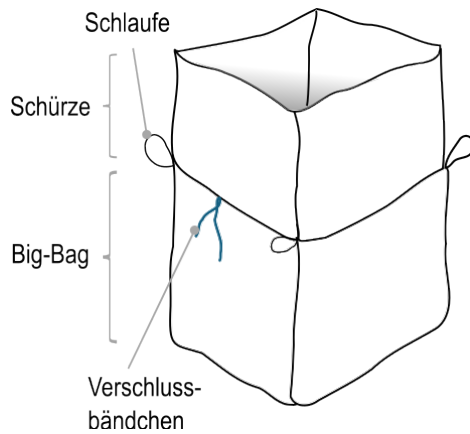
The IBC-cage box essentially comprises of a frame, mesh cage and Big Bag (see: *IBC-cage box components*). In its assembled state, the frame and mesh cage enclose the Big Bag containing the waste, thereby protecting the waste from physical impact and providing dimensional stability. The IBC-cage box simplifies handling and transportation of the waste.



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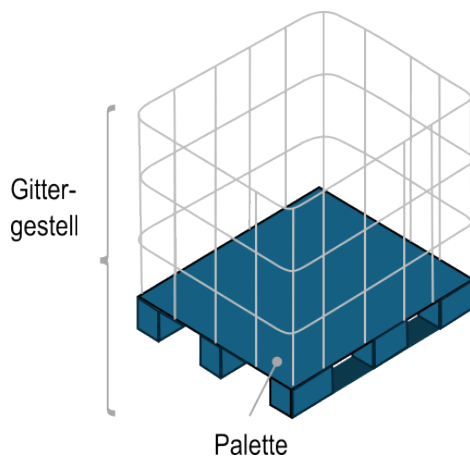
IBC-cage box components



Big Bag with integrated top skirt

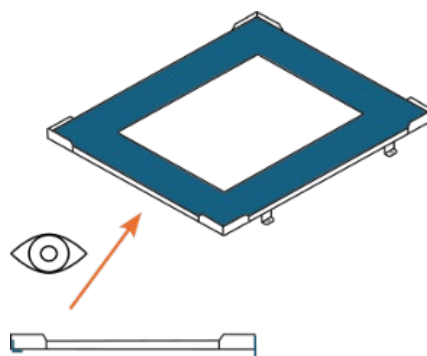
Comprising a sturdy woven plastic webbing that encloses the waste. The top skirt is tied closed using the closure straps and the lifting loops facilitate handling.

- **Big Bag:** Length * (L): 1,000 mm, width* (W): 1,200 mm, height* (H): 1,150 mm;
- **Fabric:** coated polypropylene, flame retardant, safe for use in terms of occupational mining hygiene, antistatic.
- **Top skirt:** Dimensions H*: 1,150 mm, opening approx. 4,800 mm circumference for pulling over; fabric: coated polypropylene; load capacity: SWL 1,000 kg *(tolerance +/- 30 mm)



Mesh cage

- Frame material made of steel.
- The pallet is made of either wood, plastic or metal.
- **Dimensions:** 1.000×1.200×1.160 mm (L×W×H), wt. 35 kg.
- The mesh frame allows the waste to be transported and stored in a dimensionally stable manner.
- The pallet is firmly bolted to the frame and is therefore an integral component.



Frame

- The frame encloses the mesh cage as it is fixed to the top bar of the mesh cage on both sides using two securing hooks and two securing straps.
- **Dimensions:** 1231×1033×50 mm (L×W×H) made of steel (ST1203 unalloyed).

General safety instructions

Observe the labelling on the IBC-cage box, the hazard warnings and the safety advice when working with, transporting and storing the IBC-cage box.

In addition to the hazard warnings and safety advice contained in this documentation, we would also like to draw your **attention to the observance of the applicable work and operating instructions**. Please also observe the generally applicable, statutory and other binding regulations relating to accident prevention and environmental protection.



The IBC-cage box is usually filled with hazardous waste. Improper handling of hazardous waste can lead to serious and sometimes life-threatening harm to health and cause environmental damage.

We would therefore like to point out that the applicable work and operating instructions, together with the generally applicable, statutory and other binding regulations, must be observed, particularly when carrying out activities involving hazardous waste.



Protect the Big Bag from sharp and pointed objects. There is a risk of leaking waste if the Big Bag is damaged.

Description of the activity

To pack the waste, the IBC-cage box with Big Bag and mesh cage must first be prepared and – after the waste has been filled – secured with the closure straps and by closing the cage. How to assemble and close the IBC-cage box is described in the following **steps 1 - 7**.

Ensure that you are wearing the appropriate protective equipment and observe the hazard warnings.



Wear hand protection when assembling the IBC-cage box or performing other manual work on the unit.



Wear safety shoes.

Depending on the hazard potential of the waste to be filled, additional personal protective equipment may be required:

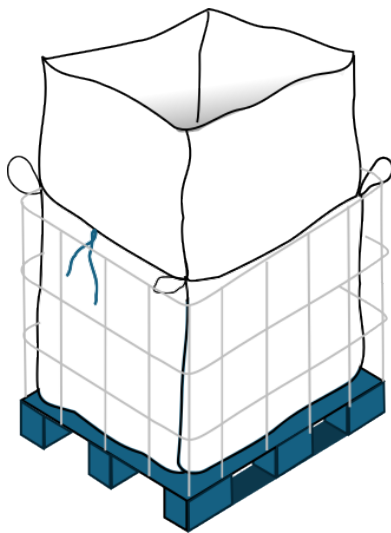


Respiratory protection

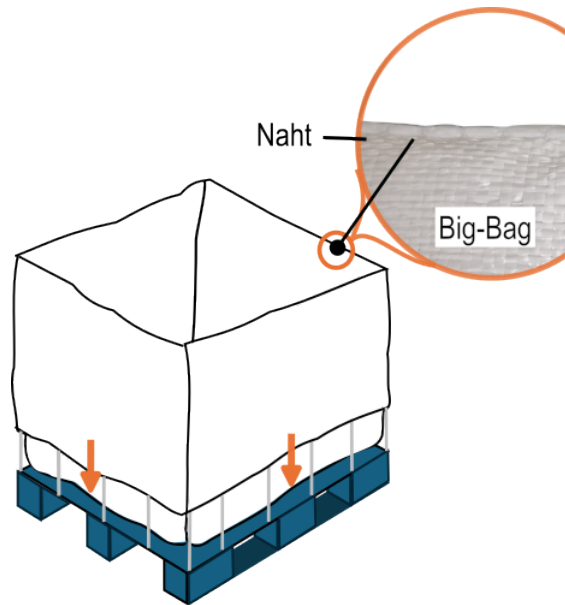


Eye protection

Assembly: steps 1 – 7



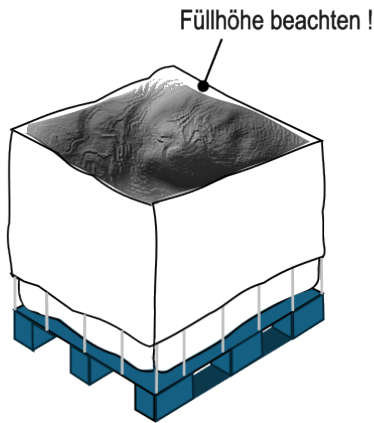
1. Unfold the Big Bag and top skirt inside the mesh cage.



2. Pull the top skirt outwards over the mesh cage and down the outside of the frame until the seam between the Big Bag and top skirt is flush with the upper edge of the mesh cage.



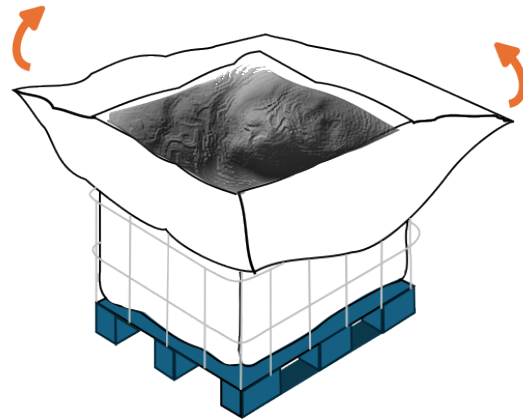
Please observe the applicable work and operating instructions when handling hazardous waste. Additional personal protective equipment may be required, e.g. eye and respiratory protection.



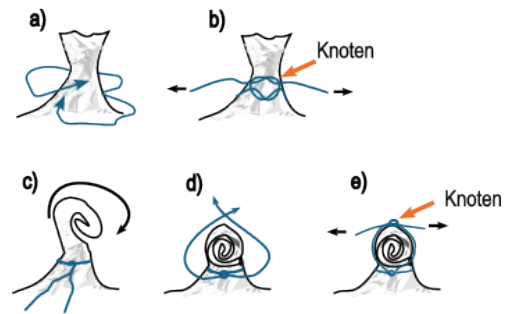
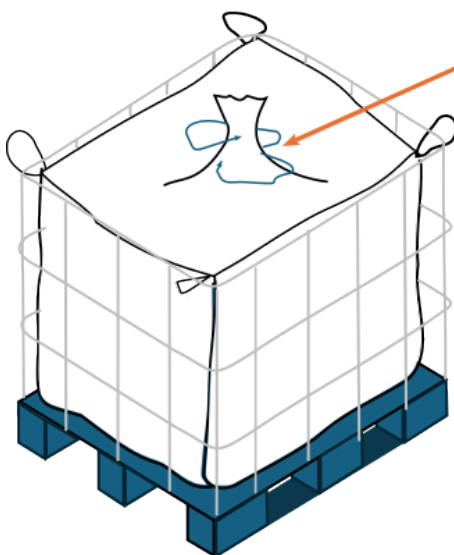
3. Filling:

The Big Bag may only be filled to a level below the inner seam. (this seam is shown in *step 2*).

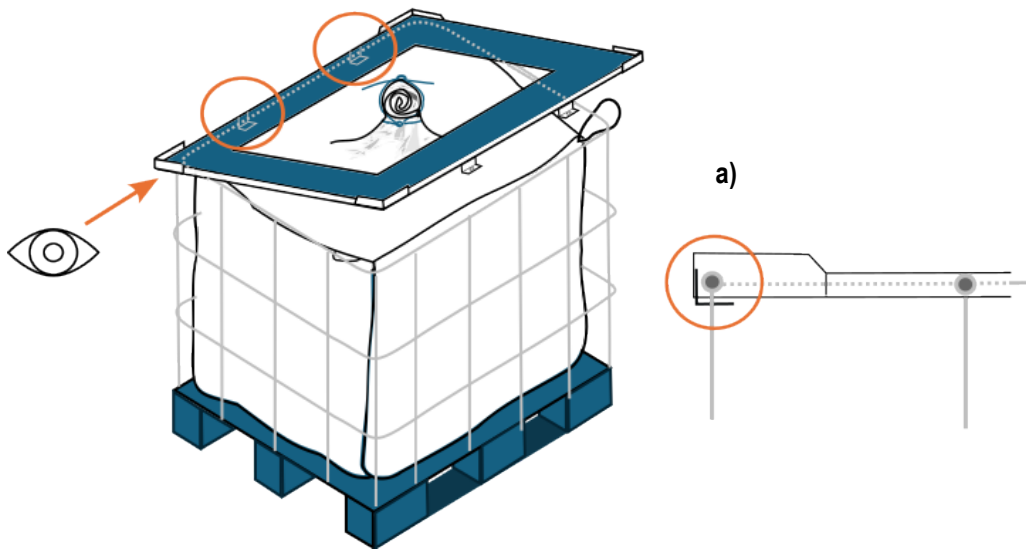
! Caution: The maximum permissible load capacity of the big bag is 1,000 kg!



4. Turn the top skirt inwards so that it lies completely on top and close it towards the centre.



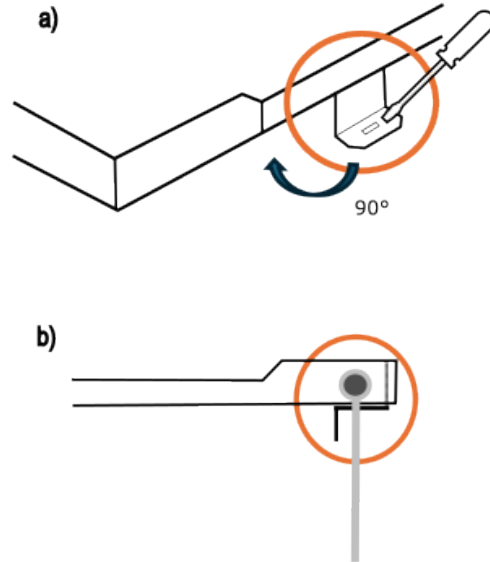
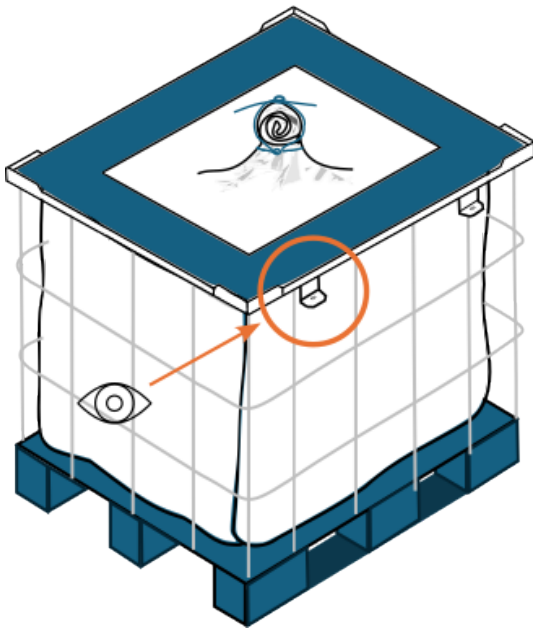
5. Tie the top skirt closed with the closure straps (a, b), roll up the tip over the knot (c) and secure with the remaining length of closure strap by tying another knot (d, e).



6. Place the frame onto the mesh cage and align the inwardly bent securing hooks with the top horizontal grid bar of the frame (a).



The frame may have sharp edges due to the manufacturing process.
There is a risk of cuts and crushing when positioning the frame.



7. Use a screwdriver to bend the two securing straps on the frame by 90° (a) so that they are fixed to the top bar of the frame (b).



There is a risk of injury due to slipping with the screwdriver.
Ensure that the screwdriver is strong enough to cope with the leverage forces.

Transport

The IBC-cage box must be loaded and unloaded from or onto a lorry using a suitable load handling device (e.g. forklift truck).

Caution: Do not step under suspended loads.



Please note that when moving the IBC-cage boxes, their weight means that a risk of entrapment and crushing exists.

Frames can be sharp-edged.

Wear appropriate protective equipment when loading and unloading the IBC-cage boxes:



Wear hand protection.



Wear safety shoes.



Wear a helmet.

In order to transport the IBC-cage boxes safely, they must be secured to the vehicle using suitable means, such as lashing straps and load securing nets.

Stackability

Transport of empty IBC-cage boxes:

A maximum of two mesh cages may be stacked on top of one another. The frames are transported upright in a mesh cage (*Fig. 2*).

Filled IBC-cage boxes may only be transported with the frames in place and fixed and stacked a maximum of two high.



Fig.2. The frames are transported upright in an empty mesh cage.

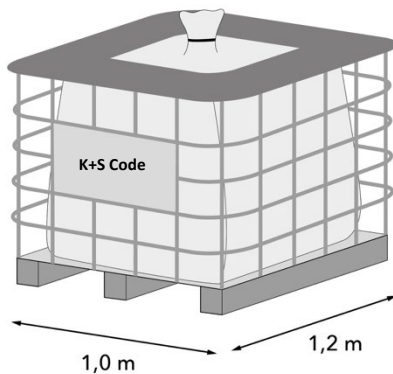
Storage

Store the components of the IBC-cage box (frame, mesh cage and Big Bag) in a dry place. For storage, stack a maximum of two mesh cages on top of one another. For the storage location, a firm, load-bearing surface must be selected. The following applies to IBC-cage box loaded with waste: The storage location should be appropriate and only accessible to authorised persons. Protect the Big Bag from sunlight. The same stacking instructions apply for storage as for transport.

Acceptance Criteria Underground Waste Disposal Plant Herfa-Neurode

Packaging requirements Cage box (IBC)

(Date: December 1, 2022)



IBC lattice box system consisting of:

- Empty IBC lattice box
- with suitable big bag inside
- attached sheet steel frame

<p>Version and filling</p> <ul style="list-style-type: none"> - Cage box made of welded, galvanised tubular frame (round tube or square tube) - Cage box with a sheet metal pallet base for optimization of stacking - Frame screw-connected, no sharp edges - Lattice boxes with a pallet foot made of sheet metal, wood or plastic - Gross weight according to approval, but max. 1,500 kg - F-IBC inside (UTD big-bag: flame retardant, antistatic and safe regarding mining hygiene) - Delivery only as a complete system according to the illustration shown above 	<p>Labelling (F-IBC)</p> <ul style="list-style-type: none"> - Permanent marking with the “K+S Code” (no stickers) on opposite sides - Font height min. 10 cm - Visible on the sides that the forklift picks up <p>Marking in accordance with ADR and GefStoffV (Hazardous Substances Ordinance), if applicable</p> <p>ALTERNATIVE / additional</p> <p>Maring on the sheet metal sign</p> <ul style="list-style-type: none"> - Permanent marking with the “K+S Code” (no stickers) on opposite sides - Font height min. 10 cm - Marking in accordance with ADR and GefStoffV (Hazardous Substances Ordinance), if applicable
<p>Dimensions</p> <ul style="list-style-type: none"> - Length: 1.2 m, depth: 1.0 m, height: 1.16 m - Inside height (upper edge of pallet to upper edge of cage box) approx. 105 cm - Other dimensions on request 	<p>Cage box base</p> <ul style="list-style-type: none"> - Pallet foot made of sheet metal, wood or plastic - standardized pallet dimensions - 1.00 m wide side can be picked up and transported with a standard forklift